



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-3820; Directorate Identifier 2014-SW-024-AD]

RIN 2120-AA64

Airworthiness Directives; Various Restricted Category Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for various restricted category helicopters. This proposed AD would require cleaning and visually inspecting certain main rotor (M/R) blades and, depending on the outcome of the inspections, repairing or replacing the M/R blades. This proposed AD is prompted by a report of an M/R blade with multiple fatigue cracks around the blade retention bolt hole. The proposed actions are intended to detect a crack in the M/R blade, and prevent failure of the M/R blade and subsequent loss of helicopter control.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-3820 or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed rule, contact Bell Helicopter Textron, Inc., P.O. Box 482, Fort Worth, TX 76101; telephone (817) 280-3391; fax (817) 280-6466; or at <http://www.bellcustomer.com/files/>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, Texas 76177.

FOR FURTHER INFORMATION CONTACT: Charles Harrison, Project Manager, Fort Worth Aircraft Certification Office, 10101 Hillwood Pkwy., Fort Worth, Texas 76177; telephone 817-222-5140; email Charles.C.Harrison@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document.

The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

Discussion

We propose to adopt a new AD for Model TH-1F, UH-1B, UH-1F, UH-1H, and UH-1P restricted category helicopters. This proposed AD would require repetitively cleaning and visually inspecting the M/R blades for a crack, corrosion, an edge void, loose or damaged adhesion, and an edge delamination. Depending on the results of the inspections, this proposed AD would require either repairing or replacing the M/R blades.

This proposed AD is prompted by a Bell Helicopter Textron Inc. (BHTI) evaluation of an M/R blade installed on a Model UH-1H helicopter that had multiple fatigue cracks around the blade retention bolt hole. The cracks resulted from a void between the lower grip plate and the grip pad. A “substantial” void also was found at the outboard doubler tip on the lower blade surface. A different part-numbered M/R blade of the same type installed on the Model UH-1H helicopter may also be installed on Model TH-1F, UH-1B, UH-1F, and UH-1P helicopters. The proposed actions are intended to detect a crack in an M/R blade, and prevent failure of the M/R blade, and subsequent loss of helicopter control.

FAA’s Determination

We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

Related Service Information

Bell Helicopter issued Alert Service Bulletin (ASB) No. UH-1H-13-09, dated January 14, 2013, for the Model UH-1H helicopter. ASB No. UH-1H-13-09 specifies a one-time visual inspection, within 10 hours time-in-service (TIS), of the lower grip pad and upper and lower grip plates for cracks, edge voids, and loose or damaged adhesive squeeze-out. ASB No. UH-1H-13-09 also specifies a repetitive and more detailed visual inspection, daily and at every 150 hours TIS, of the lower grip pad, upper and lower grip plates, and all upper and the lower doublers for cracks, corrosion, edge voids, and loose or damaged adhesive squeeze-out.

Bell Helicopter Textron also issued ASB No. 204-75-1 for Model 204B helicopters and ASB No. 205-75-5 for Model 205A-1 helicopters, both Revision C and both dated April 25, 1979. ASB No. 204-75-1 and ASB No. 205-75-5 call for visually inspecting the M/R blades during each daily inspection and repetitively washing the blades and applying WD-40. ASB No. 204-75-1 and ASB No. 205-75-5 also provide instructions for repetitively inspecting the blades every 1,000 hours of operation or every 12 months, whichever occurs first, or within 150 hours or 30 days, whichever occurs first, if the blades have more 1,000 hours of operation or have been in service more than 12 months. While ASB No. 204-75-1 and ASB No. 205-75-5 do not apply to the helicopters that are the subject of this proposed AD, they do apply to the affected M/R blades.

Proposed AD Requirements

This proposed AD would require within 25 hours TIS or 2 weeks, whichever occurs first, and thereafter at intervals not to exceed 25 hours TIS or 2 weeks, whichever occurs first, cleaning the upper and lower surfaces of each M/R blade from an area starting at the butt end of the blade to three inches outboard of the doublers. The proposed AD also would require visually inspecting various M/R parts for a crack or corrosion using a 3X or higher power magnifying glass and a light.

If there is a crack, corrosion, an edge void, loose or damaged adhesive squeeze-out, or an edge delamination before further flight, this proposed AD would require repairing the M/R blade or replacing it with an airworthy M/R blade, depending on the condition's severity.

Differences between this Proposed AD and the Service Information

ASB No. UH-1H-13-09 specifies a one-time inspection and then a second

repetitive inspection daily and at every 150 hours TIS, and ASB No. 204-75-1 and ASB 205-75-5 call for visually inspecting the M/R blades daily and every 1,000 hours TIS or 12 months, whichever occurs first. The proposed AD would require all inspections at intervals not to exceed 25 hours TIS or two weeks, whichever occurs first. This proposed AD contains more detailed inspection requirements and a more specific inspection area than the instructions in ASB No. UH-1H-13-09. Lastly, ASB No. UH-1H-13-09 applies to Model UH-1H helicopters with M/R blade P/N 204-011-250-113, ASB No. 204-75-1 applies to Model 204B helicopters with M/R blade P/N 204-011-0250 (all dash numbers), and ASB No. 205-75-5 applies to Model 205A-1 helicopters with M/R blade P/N 204-011-0250 (all dash numbers). This proposed AD would apply to Model TH-1F, UH-1B, UH-1F, UH-1H, and UH-1P helicopters with M/R blade P/N 204-011-250-005 or 204-011-250-113.

Costs of Compliance

We estimate that this proposed AD would affect 607 helicopters of U.S. Registry and that labor costs average \$85 a work-hour. Based on these estimates, we expect the following costs:

- Cleaning and performing all inspections of a set of M/R blades (2 per helicopter) would require a total of ½ work-hour. No parts would be needed. At an estimated 24 inspections a year, the cost would be \$1,032 per helicopter and \$626,424 for the U.S. fleet.
- Replacing an M/R blade would require 12 work hours and parts would cost \$90,656, for a total cost of \$91,676 per blade.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by Reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Various Restricted Category Helicopters: Docket No. FAA-2015-3820; Directorate Identifier 2014-SW-024-AD.

(a) Applicability

This AD applies to Model TH-1F, UH-1B, UH-1F, UH-1H, and UH-1P helicopters with a main rotor (M/R) blade, part number 204-011-250-005 or 204-011-250-113, installed.

(b) Unsafe Condition

This AD defines the unsafe condition as a crack in an M/R blade, which could result in failure of the M/R blade and subsequent loss of helicopter control.

(c) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(d) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(e) Required Actions

(1) Within 25 hours time-in-service (TIS) or 2 weeks, whichever occurs first, and thereafter at intervals not to exceed 25 hours TIS or 2 weeks, whichever occurs first, clean the upper and lower exposed surfaces of each M/R blade from an area starting at the butt end of the blade to three inches outboard of the doublers. Using a 3X or higher power magnifying glass and a light, inspect as follows:

(i) Visually inspect the exposed area of the lower grip pad and upper and lower grip plates of each M/R blade for a crack and any corrosion.

(ii) On the upper and lower exposed surfaces of each M/R blade from blade stations 24.5 to 35 for the entire chord width, visually inspect each layered doubler and

blade skin for a crack and any corrosion. Pay particular attention for any cracking in a doubler or skin near or at the same blade station as the blade retention bolt hole (blade station 28).

(iii) Visually inspect the exposed areas of each bond line at the edges of the lower grip pad, upper and lower grip plates, and each layered doubler (bond lines) on the upper and lower surfaces of each M/R blade for the entire length and chord width for an edge void, any corrosion, loose or damaged adhesive squeeze-out, and an edge delamination. Pay particular attention to any crack in the paint finish that follows the outline of a grip pad, grip plate, or doubler, and to any loose or damaged adhesive squeeze-out, as these may be the indication of an edge void.

(2) If there is a crack, any corrosion, an edge void, loose or damaged adhesive squeeze-out, or an edge delamination during any inspection in paragraph (e)(1) of this AD, before further flight, do the following:

(i) If there is a crack in a grip pad or any grip plate or doubler, replace the M/R blade with an airworthy M/R blade.

(ii) If there is a crack in the M/R blade skin that is within maximum repair damage limits, repair the M/R blade. If the crack exceeds maximum repair damage limits, replace the M/R blade with an airworthy M/R blade.

(iii) If there is any corrosion within maximum repair damage limits, repair the M/R blade. If the corrosion exceeds maximum repair damage limits, replace the M/R blade with an airworthy M/R blade.

(iv) If there is an edge void in the grip pad or in a grip plate or doubler, determine the length and depth using a feeler gauge. Repair the M/R blade if the edge void is within maximum repair damage limits, or replace the M/R blade with an airworthy M/R blade.

(v) If there is an edge void in a grip plate or doubler near the outboard tip, tap inspect the affected area to determine the size and shape of the void. Repair the M/R blade if the edge void is within maximum repair damage limits, or replace the M/R blade with an airworthy M/R blade.

(vi) If there is any loose or damaged adhesive squeeze-out along any of the bond lines, trim or scrape away the adhesive without damaging the adjacent surfaces or parent material of the M/R blade. Determine if there is an edge void or any corrosion by lightly sanding the trimmed area smooth using 280 or finer grit paper. If there is no edge void or corrosion, refinish the sanded area.

(vii) If there is an edge delamination along any of the bond lines or a crack in the paint finish, determine if there is an edge void or a crack in the grip pad, grip plate, doubler, or skin by removing paint from the affected area by lightly sanding in a span-wise direction using 180-220 grit paper. If there are no edge voids and no cracks, refinish the sanded area.

(viii) If any parent material is removed during any sanding or trimming in paragraphs (e)(2)(vi) or (e)(2)(vii) of this AD, repair the M/R blade if the damage is within maximum repair damage limits, or replace the M/R blade with an airworthy M/R blade.

(f) Special Flight Permit

Special flight permits are prohibited.

(g) Alternative Methods of Compliance (AMOC)

(1) The Manager, Rotorcraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Charles Harrison, Project Manager, Fort Worth Aircraft Certification Office, 10101 Hillwood Pkwy., Fort Worth, Texas 76177; telephone 817-222-5140; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(h) Additional Information

Bell Helicopter Alert Service Bulletin (ASB) No. UH-1H-13-09, dated January 14, 2013, and Bell Helicopter Textron ASB No. 204-75-1 and ASB 205-75-5, both Revision C and both dated April 25, 1979, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Bell Helicopter Textron, Inc., P.O. Box 482, Fort Worth, TX 76101; telephone (817) 280-3391; fax (817) 280-6466; or at <http://www.bellcustomer.com/files/>. You may review a copy of information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, Texas 76177.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 6210, Main Rotor Blades.

Issued in Fort Worth, Texas, on March 29, 2016.

James A. Grigg,

Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.

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